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THE BATTLE OF LIFE.

If life be a battle, as in some sense it generally is, it is plain that the young should have a reasonable preparation for the contest. The necessity for this is fully recognised in the widespread course of elementary education, now happily established as a matter of legal compulsion in this country; and is scarcely less recognised in the secondary or higher branches of instruction; but here comes in the unpleasant fact that much of this superior kind of learning is little better than thrown away. It is too obvious, from various indications, that far too many youths on whom a costly education has been lavished live in idleness, and in ordinary phrase are good for nothing. Neither able to work nor want, and pampered by indulgence, they in reality demonstrate a hearty contempt of honest industrial pursuits, and enjoy existence as mere consumers of food and clothing, provided, less or more grudgingly, by relatives. There they are in hundreds, lounging in club-rooms and watering-places, and encumbering the public thoroughfares—a bad example everywhere. For these young swells, the battle of life has to be fought by deputy.

It is customary for distinguished statesmen, when appointed to the rectorship of universities, to deliver eloquent orations to the assembled students on the prodigious importance of storing their minds with learning for learning's sake. That, in different forms, is the burden of their song. The students addressed are to have no practical object in view. To take in an enormous stock of classical languages and mathematics, and so attain a high position in scholarship, is what is expected of them. They are warned against anything like trying to think about getting on in the world; that is beneath their notice. Exalted learning alone deserves ambitious consideration. We have sometimes thought that these high-flown recommendations of learning in the abstract are not only carried a little too far, but are pretty much of a sham. Anyway, they can

scarcely fail to be injurious. To tell a parcel of lads in this *ex-cathedra* fashion, that learning will be its own reward, without a hint as to what is to be the practical issue, is apt to lead them very much astray.

Erudition is of course to be valued in connection with the learned professions. We are likewise aware that the routine of education at Eton, Rugby, and other public schools of a high order, finishing off with degrees at Oxford or Cambridge, has the merit of cultivating on a large scale a singularly polished element in society. To this source we habitually trace some of the greatest lawyers and men of science, to say nothing of dignitaries in the church. Unfortunately, there are dark sides to the picture. How many men can boastingly say: 'I am an M.A. of Cambridge;' and yet possess so small a share of common-sense or worldly wisdom, as to be spoiled for all good purposes. The redundancy of high-class scholars is, however, most conspicuous in the number of genteel idlers to whom we have called attention. Unqualified to perform any useful work, the difficulty is to know what to do with them. Their polish is a positive drawback. The world has much coarse business to do—ploughing and delving and hammering, for example—not suited to those who are unaccustomed to hand-labour, or indeed, to labour of any kind. In short, society is getting plagued with the superfluity of youths who seem as if educated to do nothing. They may be able to tell from their classical lore all about the Argonauts who sailed from Colchis in search of the golden fleece. But elegant myths of this description are not in the least wanted in the affairs of ordinary life, and do little in the way of mental culture. No one cares about the Argonauts. That which would be greatly preferred would be some useful knowledge in science and history bearing on every-day concerns. The ignorance prevailing even in high quarters on the subject of political economy is something pitiable; nor is it less melancholy to see how little is known of the history of times comparatively recent.

In the course of a public address lately delivered in London on University teaching, Mr Goschen pointedly refers to the study of History, English Literature, and Political Economy as a means of strengthening the mind, preparatory to taking a share in the active duties of life. A knowledge of modern languages is also not on any account to be neglected. The educator, we think, has especially to consider what will sharpen the mental faculties, with a view to habitual foresight in the difficulties and emergencies that are apt to crop up in almost every one's experience. The necessity for promptitude of action occurs in a hundred ways in ordinary life. It is demonstrated on the battlefield, in the duty of the seaman, in the business of the merchant, and in the exacting work of the locomotive driver and signalman. The world is getting terribly in want of men who can not only reason correctly, but act with decisive promptitude. The dreamy indifference of the fashionable Lord Dundreary type may pass muster within the realms of Sweldom; but even there, we suspect, in this exacting age of bustle and scientific discovery, it must be losing its old wonted ground.

There are cogent reasons for believing that the number of youths devoted to a high-class education for ceremonial purposes, will in no long time suffer considerable diminution. Society seems destined to lose a certain amount of its polish, owing to the operation of causes as inevitable as the power of gravitation. The rent of land has considerably fallen, and will, to all appearance, continue to fall. Land-proprietors are already beginning to feel the pinch. Their revenue is declining; and their sons, instead of being brought up to do nothing, or to rely on appointments which cannot now be obtained, will be forced to abjure idleness, and betake themselves to pursuits inconsistent with the elegant-repose of a Cantab. It would not surprise us to hear of them becoming farmers on the patrimonial acres, or seeking homes in the Far West, where they would perhaps be less ashamed to be seen cultivating the soil for a subsistence. To accommodate young and accomplished scholars, who are driven to adopt this latter expedient, a gentleman of letters, Mr Hughes, has kindly devised a scheme for settling on a tract of land, designated Rugby, in the state of Tennessee. There, farming is to be conducted on a scale so tasteful as to give no sort of offence. At anyrate, should there be any sense of humiliation, all will be humiliated alike. There are rumours of prospective failure, owing to an imperfection in the soil; but perhaps it is too soon to say how this fanciful project will succeed. We hope it will have a fair trial. The object has in view a means of working up a material now running to waste, and that in itself is an important economical consideration.

The circumstance of being obliged to find an outlet for highly educated gentility in a western wilderness, in itself proves that a great mistake

has been committed by many parents in the method of preparing their sons for a course of useful exertion. The error comprehends not only a waste of money, but a waste of brain, along with the infliction of life-long regrets, and it may be much acute misery. If youths are to be sent to try their luck in Australia, New Zealand, or in the unsettled parts of America, let them, at least, be prepared accordingly for what they have to encounter, and not be bred up with refined expectations, habits, and tastes incompatible with the rough struggle for existence in a new country. Independently, however, of any such prospective struggle, it is evident that for home use, the market is glutted with youths, whose education of a so-called high class has unfitted them for any but a limited range of occupation.

In these remarks, we have only glanced at a vastly important subject, which, we trust, may soon engage the attention of educationists. The curriculum of school-learning in the secondary departments needs a distinct revisal, to bring it into harmony with modern requirements—in short, to prepare youth more effectually for the Battle of Life.

W. C.

THE FORTUNES OF BERTRAM OAKLEY.

CHAPTER LII.—HOW THE TRIAL ENDED.

THE examination of a few more witnesses came first. Their evidence was needful, perhaps, but not exciting. To Bertram Oakley, the counsel for the defence showed marked courtesy. He told what little he knew, as he would have told it at the bar of heaven, as simply, and well. The prisoner never once looked at him. Many curious eyes in court noted that.

'We have no questions to ask of you, Mr Oakley!' said the learned serjeant, with a bow, as Bertram stepped down.

Then came the turn of the defence. There were witnesses to be called. Nobody, of course, can prove a negative; but an imposing array of witnesses to character might, it was thought, weigh with the jury. It does not do to let juries imagine that all the proof is on one side. Serjeant Silver-tongue had hesitated long, it was whispered among the barristers present, as to whether to call no witnesses, and let the Attorney-general have no second innings; or to adduce testimony, and let Sir Richard have his right of reply to the grand speech that was yet to be spoken. It had been thought best to call the witnesses.

Old Lord Haverstock was the first called. He stared, in bovine fashion, from behind his stiff cravat, at judges, counsel, and audience. Had met Mr Denham at Naples. Was not quite sure whether their acquaintance had not begun, two years before, at Geneva. Had introduced Mr Denham to his family. Had the highest, that is to say, an excellent opinion of Mr Denham. Mr Denham and he were both fond of pictures. The prisoner had dined with him, both at Haverstock House and abroad. Thought that he had accepted the prisoner's hospitality, but was not quite sure, at the Caffè del' Europa at Naples.

'In fact, Lord Haverstock,' said Sir Richard,

who rose to cross-examine, 'your evidence comes to this. You have dined with Mr Denham; you have chatted about pictures in his company, and you know no harm of him. Is not that a fair summary?'

Old Lord Haverstock retired, apoplectic and malcontent; and then a Lord George Chatterley, Under-Secretary for the Income Tax Department, took his place. Lord George had a good deal to say for himself. He had something to say, too, for the prisoner. In his eyes, Mr Walter Denham was a harmless, well-meaning man, who would not hurt a fly. 'Touchy, I daresay, about Art, but a person I have a sincere regard for,' he said in conclusion. A Bishop, a wealthy merchant, Prince Galitzin from the Russian Embassy, and M. Bossu, the French Secretary of Legation, declared, in varying language, that Uncle Walter was a *parfait homme d'honneur*, a man of sound principles, a worthy man, *un homme de bonne compagnie*; and there was an end of Mr Denham's praises.

Then Mr Serjeant Silvertongue rose, and a little flutter of anticipation ran through the closely wedged audience; and Sir Richard Sharpe himself, who cared no more for speeches than did the judges themselves, half-closed his eyes and waited, sardonically, to hear how his rival would transmute the wrong into the right.

The Serjeant did not make a good, or at any rate a grand beginning. In low, sad, tremulous tones, he bewailed the heavy weight of circumstantial evidence that pressed upon his client—his innocent client, as he trusted to prove—that circumstantial evidence that has hanged so many guiltless men, in the hard old days when the shadows of the gallows darkened every humble British hearth and home. Then he proceeded to pay an elaborate compliment to the jury, to their independence, their probity, their sense, that Anglo-Saxon mother-wit of theirs, which caused them to scent out the truth, even when great orators and potent functionaries misused their talents to drive, huddle, and hustle juries into a foregone conclusion. He drew quite a fancy portrait of Uncle Walter, as of a man careless, charming, generous, no one's enemy but his own, a child-like, frank-souled creature, scarcely realising the magnitude of the iniquity attributed to him. Would they break a butterfly on the wheel? What was against his client? The testimony of a miscreant like Crawley—'Judas' Crawley; and the deposition of Crawley's reckless accomplice, Nathaniel Lee. And Serjeant Silvertongue asked if any jurymen could ever hope to enjoy a sound night's rest again, or to be happy in the bosom of his family, unless he righted this calumniated man.

It was a fine forensic effort; but for all the good it did, Mr Serjeant Silvertongue—who may or may not have been a lineal descendant of his namesake immortalised by Hogarth—might as well have let off fireworks in court.

The Attorney-general smiled as he rose to reply. Sir Richard did not speak long. He tore to pieces in five minutes the flimsy sophistries of his opponent; in five more, he had said all that was to be said concerning the value of the evidence to character, and had called upon the jury to do their duty.

The summing-up came next. The charge of

the judge was adverse to the defence. The jury retired.

'I give them twenty minutes,' said an expert, pulling out his watch. In fifteen minutes they were back in their box.

'Guilty, my lord,' announced the foreman.

'What have you to say, prisoner?' asked the senior judge, fluttering over the pages of his notebook, before sentence was pronounced.

Mr Walter Denham was on his feet, leaning lightly and in an elegant attitude on the rail of the dock. His handkerchief was in his white hand, on which jewels glistened. Twice, he bowed, with formal deference, to the Bench. Then he bent his head, and hid his face in the soft cambric, as though overcome by emotion. There was a moment's pause of expectation; another, and then Uncle Walter slipped, or slid, away from his erect position, and dropped, a huddled heap, upon the floor. There was an outcry, a stir, a trampling of heavy feet, and an exclamation, 'Poison!'—'A doctor!'—'He is dead!' And then the confusion, the babble of tongues, the shrill feminine screams, the pushing and the turmoil, made a bear-garden of the court of justice.

A doctor was soon found—one, two, three doctors. Where there is a crowd, a man of healing is seldom far to seek. But when the surgeons were admitted into the narrow pen of a place, crowded by tipstaves and police and irrepressible sightseers, they could do nothing to keep a spark of life in the heavy, languid head and limp body of what had lately been Walter Denham. The prisoner had kept, unsuspected, in the hollow of a great signet-ring, cunningly constructed by Italian goldsmiths, a few grains of the only poison powerful enough to slay at an instant's warning; and now shame and punishment and reproof from mortal lips were all too late for Uncle Walter!

(To be concluded next month.)

CURIOUS FACTS RELATING TO GUNSHOT WOUNDS.

BY A SURGEON.

THE treatment of gunshot wounds and contusions has been resolved into a distinct branch of surgery, of more importance necessarily to the military than the civil practitioner of that art, yet not without interest to the latter, seeing that every form of the injury which is common on the battlefield may occasionally crop up in the routine of every-day practice. Under this heading, too, may practically be included every accident resulting from projectiles, however propelled, such as those which follow gas, steam, or chemical explosions; and the secondary injuries, so to speak, inflicted by splinters of metal, wood, or stone, torn up by the passage of a ball, or in blasting and mining operations, by fragments of clothing or other extraneous matter driven in, and by sharp-pointed pieces of fractured bones dispersed among important tissues by the force of the concussion.

Injury supposed to be received by the *wind* of a passing bullet—about which we used to hear so much—is now shown to be a fallacy, and the disastrous results attributed to it in certain cases were probably due to causes which we shall presently note. Formerly, too, the great inflam-

mation which invariably occurs in the track of a bullet-wound, was ascribed to burning of the parts, to the poisonous nature of the projectile, or to electricity developed by the bullet by its friction against the barrel or in its passage through the air; but the later military surgeons have demonstrated that it is due simply to the bruising inevitable in a deep wound inflicted by a blunt object. Weapons charged with powder only, may be productive of serious mischief. A pistol with nothing but a pinch of powder in it has been known to kill a man by concussion of the heart, having been discharged with the muzzle resting against his chest; and Dupuytren relates a case where a man fell, pierced with a round hole, when fired at with a fowling-piece charged with powder only, at a distance of a few feet. Would-be suicides often forget or intentionally neglect to put a ball into the pistol, but lacerate themselves extensively, and sometimes fatally, by discharging it into their mouths. Sometimes a portion of the unexploded powder may be driven into the flesh by that which is exploded behind it; and, if nothing worse ensues, great disfigurement is thus produced by the tattooing of the charcoal. The wadding of a gun or blunderbuss, fired only for the effect of the explosion, has occasionally been known to kill on the stage or at reviews.

Marvellously fortunate escapes from gunshot injuries have been recorded. Bullets have been known to rebound or glance off the skin, leaving only a dent, probably from the oblique direction in which they struck; a spent ball strikes a rib and drops out again, or carries in a portion of clothing before it, rendering it easy to withdraw. Sir Astley Cooper relates two extraordinary instances, in one of which a bullet moving with full velocity entered the side, and coming in contact with a rib, was deflected out of its course, and ran round under the skin to the opposite side of the body. In the other, the bullet struck one temple, passed over the head under the scalp to the other, and never penetrated the skull at all.

The following case occurred in the practice of an eminent surgeon, whose pupil I was. A man was brought to him who had shot himself in the side of the head with a pistol, with suicidal intent. He was said to have held the weapon only an inch or two from his ear, and the extensive burning and laceration of the skin bore evidence to the truth of this statement; there was a ragged bullet-hole; nevertheless, no fracture of the bone could be detected, and there was an entire absence of 'head symptoms'—that is, those indications which point to some lesion of the brain. So he was put to bed and kept quiet, without any treatment at all beyond simple local applications, carefully watched the while for any untoward manifestations that might develop themselves. But nothing came of it, and in a week or two the man was nearly well. Then, for the first time, he complained of a pain and stiffness in the cheek, which, being examined, showed signs of an impending abscess. This formed and was opened in due course, when out dropped the bullet! Now, how was this to be accounted for? At the side of the head is an arch of bone, known technically as the *zygoma*; it may be seen in the skulls of animals, and serves to protect and strengthen the hinge of the jaw, as it were. The bullet, meeting the sharp upper edge of this arch—there was a

mark on the bullet caused probably by the bone—was turned suddenly downwards at right angles, and lodged in the thick muscles of the upper part of the cheek. But this would never have occurred if a great disproportion had not existed between the calibre of the pistol-barrel—an old-fashioned cavalry blunderbuss—and the size of the ball, which allowed much of the powder's force to be expended around it.

It is a well-known fact that bullets, coins, and other metallic objects will occasionally remain impacted in the flesh for years, without giving rise to any irritation or annoyance. In a case which came under my notice in London several years since, a ball had undoubtedly passed into the chest, and is undoubtedly there to this day; yet the patient recovered without any bad symptoms, and is still alive and well.

Two German students, being in love, or in debt, but in any case in despair and wearied of the world, agreed to put an end to their troubles by shooting each other through the heart simultaneously. So much was gathered from a paper signed by both of them, found on their table when the police, alarmed by the double explosion, broke into the room where they lay on the floor, weltering in their blood, one a corpse and the other desperately wounded. But when the latter had recovered sufficiently to speak, he emphatically denied the truth of the allegation that he had murdered his comrade, and stated that though he had signed the paper he had repented of his determination at the last moment; not so his friend, however, who seizing both pistols, had shot him in the breast, and killed himself afterwards. A verdict of wilful murder was returned against him by a coroner's jury; but when he was put upon his trial, after a long and dangerous illness, he was allowed the benefit of the doubt—a decision at which no one will cavil much.

Hennen states that he has seen five cases in which bullets were lodged within the skull and did not prove immediately fatal; Cunningham speaks of a boy who survived for twenty-four days with the breech of a pistol, weighing nine drachms, in his head, lying on one of the membranes of the brain, and resting against the concavity of the occiput; while Dr O'Callaghan has recorded the remarkable case of an officer who lived seven years with the breech of a fowling-piece—three ounces in weight—lodged in his forehead, and actually supporting the right hemisphere of the brain!

Nevertheless, such instances are rare; and it must not be supposed that an impacted bullet—such as that which carried off the late lamented President of the United States—will not set up serious mischief in the vast majority of cases, or that even if it does not cause irritation at first, that it can be allowed to remain in the body with impunity. Military surgeons of the present day are unanimous in their opinion that it should always be extracted without delay; for, as Dr Macleod observes, not only may this operation afterwards become a matter of increased difficulty, owing to swelling and inflammation; but the fact of its extraction removes a source of mental disquietude as well as physical suffering, and the mind of the patient becomes more tranquil and easy. A foreign body of this nature may take on a serious or fatal action after remaining

quiescent for years. A soldier died in University College Hospital two years and a half after he was shot in the chest; and it was found that the ball had actually traversed the body, wounding the lung, kidney, and other important organs, and had finally perforated the spine and lodged there. Liston removed a similar missile from General Bem's hip after it had lain there nineteen years; and Marshal Moncey, it has been alleged, died from the effects of a gunshot wound forty years after its reception.

To discover a bullet in a deep wound is sometimes no easy matter; though the locality may be now pretty nearly ascertained by means of the induction balance of Professor Hughes. The instrument devised by Nelaton, by means of which he discovered the ball deeply situated in Garibaldi's foot, is a striking instance of the application of a collateral science in skilful hands—and what sciences are not collateral to surgery and medicine? It consisted of a simple probe, tipped with rough unglazed porcelain; this was passed down to the site of the suspected bullet and twirled about. When examined, the porcelain was found to be covered with dark streaks, and these being scraped off and submitted to delicate chemical analysis, were proved to consist of lead. The presence of the bullet was thus established beyond all doubt. Wonderfully ingenious as it is, it is possible to conceive two opposite combinations of circumstances under which this device might fail—where the ball lies beneath a shield of soft tissues or coagulated blood which would prevent the communication of the characteristic leaden stain, and where it has already fallen out, but has lead-marked some projecting point of bone from which the probe might receive enough to determine the existence of metal.

The direction from which the projectile has been received and in which it traverses the injured part, is a matter of great importance. As a rule, it forms two openings, one of entry and one of exit, the former being distinguishable from the latter by its small, circular, depressed, and generally clean appearance; while the exit aperture is larger, irregular in outline, and everted. This is especially seen in wounds which have caused double perforation of the skull, and depends, as might be expected, on the lessened momentum of the ball, owing to the resistance it meets with on its passage through. It is a curious fact that the aperture of entry will almost always be found to be smaller than the bullet itself; but the same thing is seen when a piece of green timber or any elastic material is struck. A single bullet has been known to produce six wounds in the same person, passing through one hand and both thighs; and more than one case is on record where the ball has split in halves against the sharp edge of the shin-bone, having thus one aperture of entry with two of exit. The modern conico-cylindrical bullet, in connection with the rifled firearms now in use, is the most destructive missile ever invented, tearing its way through the densest structures, splitting up the shafts of bones by its wedge-like action, and so spreading its effect in every direction beyond the actual spot it strikes, and not liable to be deflected from its straight course by any resistance of the tissues. Veins, arteries and tendons, by virtue of their elasticity and slippery nature, would glide aside from the

old round musket-ball, which often passed between such important structures without damaging them, or was even turned in another direction by their elastic reaction. In fact, the introduction of these conical projectiles into warfare has of late years altered the whole system of military surgery, since gunshot wounds are a much more serious affair now than formerly, and treatment which was generally adopted for injuries in certain situations has now to be abandoned for measures more prompt and active, less conservative, and attended with a smaller prospect of saving life.

That indefinable depression of the vital powers known as 'shock,' which follows a severe accident—though not always immediately—is much greater with these conical bullets than with the round ones. The direction of the wound is often a point of considerable interest in the legal aspects of a case. Sir Astley Cooper, by careful examination of the apertures of entry and exit in a murdered man, ascertained that the fatal shot must have been fired by a left-handed man; and this led to the detection of the criminal!

Cannon-balls occasionally inflict the most extraordinary injuries. A spent ball, or one striking obliquely or rolling over the surface of the body, will sometimes bruise without breaking the skin, which is preserved by its elasticity, while the parts beneath—bones, muscles, vessels, the internal organs, and even the spine itself—may be shattered and crushed to a pulp. These were the accidents which, as we have already stated, were formerly termed 'wind contusions,' and were supposed to occur without direct contact with the projectile, but by the action of the current of air which it set in motion.

Dreadful wounds are not attended with such pain as might be expected at the moment of their reception, the excitement of the battle overpowering all feeling for the time. Thus it often happens that a soldier is wounded even mortally in the heat of action without knowing it until he sees or feels the blood trickling; Hennen states that he has seen limbs smashed or carried clean away by cannon-shot, without the sufferer being conscious of the hurt; and Macleod narrates that an officer in the Crimea 'had both his legs carried off, and was not aware of the injury he had received till he tried to rise.'

With regard to amputation and other operations after gunshot injuries, experience has shown that the sooner they are performed, the better is the patient's chance of ultimate recovery; and Wiseman's advice to 'cut off the limb quickly, while the soldier is heated and in mettle,' though discredited for a long time after his day, is now again the motto of military surgeons.

CAPTAIN DESMOND'S DAUGHTER.

CHAPTER IV.—CONCLUDED.

WHEN Margaret recovered consciousness, she found herself lying on the floor; but a sofa cushion had been placed under her head, and her father, kneeling on one knee, was bending over her and gently chafing one of her hands. Yes, her father, but wofully changed. She put out both her hands and clasped his, as if to assure herself of his reality. 'Papa?' she said questioningly, in a sort of awed whisper.

'Yes, darling; it is I—your poor, worthless, old scamp of a father.'

She rose to her feet and put her arms about him, and held him in a long embrace, while her heart seemed to choke with the sobs which she was powerless to repress.

As soon as she had grown somewhat calmer, Captain Desmond said: 'I am tired now, Margery. I want to sit down;' and looking at him more particularly, she seemed to realise for the first time how very ill he was, and what a wreck he had become since she had seen him last.

She led him to the couch, on which he sank down and shut his eyes. She knelt by his side, and held one of his hands in both of hers. Then she noticed another change which had struck her vaguely at the moment she set eyes on him, but which she had not been able to specify till now. The heavy military moustache which Captain Desmond had worn since his daughter could first remember him, was gone now. His face was clean shaven. It was strange what an unfamiliar expression so slight a change lent to features that she knew so well. Then again, his light-brown hair, which had been streaked with gray, was now dyed a dark brown, and betrayed no traces of age. He was the same man she had known and loved all her life; and yet he was different.

Presently, Captain Desmond opened his eyes, and carrying his daughter's hand to his lips, he kissed it. 'She has gone—she has left me,' he said in a low voice, with his eyes gazing straight into Margaret's. 'Yes, three days ago, without one word of warning. Excepting a little loose money in my purse, she has taken everything with her: about eight thousand pounds in all.'

To this Margaret could say nothing. 'I cannot think that she has gone alone,' added the sick man presently. 'But whether she has or not, she knows that I am far too ill to attempt any pursuit. I shall never see her again.'

Nothing more was said for a little while; then Captain Desmond spoke again. 'It is singular, Madge, that you should have hunted me up on the very day that I had written to you to come to me. See, there is the letter on the table, ready for the post. It may as well be burned now.'

'You ought to have telegraphed to me days ago as soon as you found yourself left alone.'

'Ah, what I ought to have done and what I have done, have been two opposite things with me all my life. But tell me what reason has brought you all the way to Dieppe so suddenly? But no; on second thoughts, you must be tired with your journey. You shall talk to me after dinner. Ring for Jeanne.'

Margaret was glad to get away from the room for a few minutes. Although the living man was there before her, she felt that as yet she could hardly realise it as a fact that her father was not in very truth dead and buried in the little churchyard by the sea. It seemed to her as if some great miracle had been wrought. What strange story would he have to tell her?

Captain Desmond's dinner consisted of a cup of

broth followed by some simple fruit; and Margaret, notwithstanding her long journey, had not much appetite. Her father seemed a little stronger and better in the evening, and touched, with something of his old airy, bantering way, on a score of different topics. To have listened to him, you would not have thought he had a care in the world; but then Captain Desmond had always had a happy knack of throwing off his cares; trouble had ever sat lightly on him; he was emphatically a man who lived for the present moment; yesterday was yesterday, and to-morrow could take care of itself.

'And now for this narrative, *carissima*,' said the Captain, as he sat paring an apricot in his easy-chair by the open window.

Then Margaret told her father in what way her acquaintance with Mr Avory had originated, of the questions he had put to her, and how his inquiries had led him step by step to the discovery at Mardon—or rather to Dr Bond's emphatic assertion that the likeness of Mr Freshfield was that of the man whose deathbed he had attended.

Captain Desmond listened attentively, not interrupting her by a word. When she had done, all that he said was: 'Poor old Caius!' in a half-regretful tone; after which he sat for some time gazing out of the window, but evidently seeing nothing, unless it were some half-forgotten pictures of the past. At last he aroused himself with a sigh. 'Yes,' he said, turning to Margaret, 'the man who died at Mardon-le-Willows on the fourth of April was Caius Freshfield, and not Marmaduke Desmond.' He played with the fruit-knife for a few moments, and then he went on: 'I suppose the only plan will be to tell you the affair from the beginning, although, mind you, the confession is not a pleasant one to make, and least of all to you, my dear, from whom much in my past career has been carefully hidden. To begin, then. Affairs with me had grown pretty well as desperate as they could be; all my speculations of late had failed; and I knew not which way to turn. The house at Mardon was little more than a hiding-place, a haven where I could take refuge in stress of weather. On the afternoon of the fourth of April, I was on my way to Mardon, when, while I was waiting at Rosethorpe Junction, a voice that I had not heard for nearly twenty years called me by name. I turned, and found myself face to face with my old schoolmate, Caius Freshfield. The meeting was a pleasant one for both of us. I had little difficulty in persuading him to accompany me to Mardon and stay till next day. He was an old bachelor, he told me, who lived in chambers by himself, and had no ties. He had been to a sale of books at York, and was on his way back to town, when we met. At Mardon, my wife made him welcome, and there was soon a cosy little dinner on the table. The woman, Elspeth Durham, waited upon us; for economical reasons, she was the only servant we had at that time. At table, poor Caius kept on prattling about himself and his concerns, in his easy light-hearted way. To him, it seemed that everybody must be as much interested in old books as he was. Suddenly, while he was in the middle of one of his little narratives, a change came over his face, and with a low moan he sank back in his chair. I loosened his cravat, and with Elspeth's help, carried him to the sofa. There was some-

thing in his face that alarmed me from the first, and I at once sent the woman off for the only doctor in the village. Dr Bond was not long in arriving. "A bad case—a very bad case," he muttered, after making a brief examination of the unconscious man. Then turning to my wife, he said: "Your husband, ma'am, I presume?"

"Yes, my husband, Captain Desmond," she answered, to my utter astonishment. "This gentleman," she added next moment, turning to me, "is one of his oldest friends, Mr Freshfield."

"I was too stupefied to say a word."

"I am sorry to have to tell you, ma'am, that you must be prepared for the worst," added Dr Bond. My wife pressed her handkerchief to her eyes and turned away.

"I need not relate to you in detail all that followed. My poor friend died in the course of the night, without having recovered consciousness for a moment. Next day, Dr Bond gave the necessary certificate, made out in the name of Marmaduke Desmond; and my wife ordered her widow's weeds. We were the only people in the secret except Elspeth Durham, and she was a woman from whom my wife professed to have no secrets. The funeral took place in due course, as you know, and to me the cruellest part of the affair was the necessity that existed for deceiving you; but it was a necessity. As I have already said, I was stupefied by my wife's assertion to Dr Bond that Freshfield was her husband, and that I was Freshfield; and no sooner were we alone, than I demanded to know her reasons for so strange a proceeding.

"The reasons are not far to seek," she said. "You are ruined, and nothing but beggary stares us in the face. That is an existence which will suit neither you nor me. Something desperate must be done to retrieve our fortunes. That something is here ready to our hands. This friend of yours—this Mr Freshfield—will die before many hours are over. He is a bachelor, living a lonely life in chambers; you met together by accident, and no one has any knowledge that he is here. Dr Bond knows neither him nor you. Why not pass you off as your friend, and your friend as you? No one need be in the secret but Elspeth Durham, and her I can trust implicitly. You must go into hiding for a while; and the insurance money will in due course be paid to me as the widow. With a nice little fortune like that, we can make a fresh start in life where we are not known. The risk we run will be infinitesimal; while to us the difference will be between starvation and ten thousand pounds."

"That I yielded to the force of her arguments, you know already; therefore, nothing more need be said on that point. I remained in hiding for a little while in some of the upper rooms of the house. You may remember waking up one night and seeing me by your bedside. I am afraid I startled you; but I could not resist coming to look at you."

"Well, everything happened as my wife had prophesied. After due inquiries, the insurance money was paid; and my wife came to live here for a time, where I have continued to pass as her brother. What we should have done ultimately, I hardly know; probably have made our way to some part of the New World; but that is a point on which it is no use speculating. We had not been here long, before an internal disorder, from

which I have suffered more or less for years, began to develop more serious symptoms. Those symptoms have gone on increasing, till they have made me the hopeless wreck you see before you. And now she has gone, fled from me, leaving me to die here among strangers. What a heart of stone that woman has! But let her go. I have some one here now whom I would not exchange for a thousand such as she."

Twilight had crept on apace while the sick man struggled slowly and painfully through his narrative, till by the time he had ended it was nearly dark. Wicked and base as she knew he had been, he was still her father; and by the time he had finished his narrative, Margaret had crept to his side and was kneeling by him. His hand was wet with her tears. "I will never leave you again, papa, as long as I live," she said.

"No, never again, Margery," he replied as he stroked her hair fondly. "Only, it will be a very brief time, as far as I am concerned," he murmured wearily under his breath.

Margaret did not hear. She arose and closed the window; and presently Jeanne appeared with the lighted lamp.

Captain Desmond rallied for a day or two after his daughter's arrival at Dieppe; but before long, a change for the worse set in, and at the end of a fortnight he breathed his last. His last hours were soothed by Margaret's sweet ministrations. During this time, nothing was heard of Mrs Desmond, nor, in fact, did any authentic tidings of her ever afterwards come to hand.

When all was over, Margaret went back to London. Not knowing how long she might have to remain with her father, she had written to Lady Thorndale from Dieppe, resigning her situation as governess. She also wrote to Mr Avory, although the confession she had to make to him was a painful one. For the time being, she contented herself with informing him that it was in truth his uncle who had died at Mardon on the fourth of April, leaving all further revelations for some future time.

A few days after her return to London, Margaret received a note from Lady Thorndale, asking her to call at Kensington Palace Gardens. Margaret went, and was received very graciously. It appeared that the governess who had succeeded Miss Desmond had failed to give satisfaction, and was already under notice to quit. If Miss Desmond would resume the duties which she had been compelled to give up, her Ladyship would be highly gratified to take her back.

The offer was too good a one for Margaret to decline. She was fond of children, and it would almost seem like going back home to find herself again at Lady Thorndale's.

"But perhaps," said Sir Theophilus in discussing the matter with his wife, "when Miss Desmond learns what a capitalist she is, she may not care to play the humble rôle of governess any longer."

"Miss Desmond a capitalist, Theo! What can you possibly mean?" asked her Ladyship.

"At the present moment, Miss Desmond is worth exactly fifteen hundred pounds; to that extent has the little nest-egg she was good enough to intrust into my hands multiplied itself. It may now perhaps be as well to withdraw the amount from the unstable waters of

speculation, and find some sound investment for it where it will bring in a reasonable rate of interest. But that is a point which Miss Desmond herself must decide.

When Miss Desmond had expressed her pleasure at the news imparted to her by Sir Theophilus, she determined to abide by her decision to return to Kensington Gardens, at least for some time to come. She had no other home, and a life without some definite aim or purpose would hardly have seemed to her worth living. So Margaret went back to her old duties; and after a week or two, it almost seemed to her as if the events of the last six months had been nothing more than a dream.

Margaret had a tender conscience, and she could not forget that the different insurance offices which had paid the policy on Captain Desmond's life had to a certain extent been the victims of a fraud. It was a subject on which she could not open her lips to any one; and after much painful cogitation as to what her duty really was in the matter, she decided upon remitting anonymously to the several offices, and as a sort of conscience-money, the thousand pounds which she had received after Captain Desmond's supposed death.

The events recorded above happened some time ago, and Lady Thorndale is again in want of a governess for her children. A few months ago there was a quiet wedding, at which both her Ladyship and Sir Theophilus were present, when Margaret Desmond changed her name to Margaret Avory.

ELECTRIC LIGHT IN NEW YORK.

The battle between Electricity and Gas has fairly begun. It is not hard to foresee to which victory will ultimately incline; but how long the contest will last, and whether electricity will owe its triumph to English, French, German, or American champions, are questions it must be left to Time to answer. There is, however, no denying that the signal for the fray was sounded on the other side of the Atlantic. How is the fight going there? A late issue of the *New York Sun* enlightens us on that point in a long article on 'Lighting by Electricity,' from which we may gather sufficient to give our readers some idea of what has been accomplished in that way, more especially in New York, where the Brush Electric Illuminating Company has started work at five stations, and will shortly do so at a sixth. At these stations, seven engines, with an aggregate of five hundred horse-power, are now in operation, actually supplying three hundred lights of two thousand candle-power each. By twenty-three of these, part of Broadway is illuminated; the rest being let out to hotels, stores, theatres, and public gardens at the rate of a dollar a night per lamp. The Company has also engaged to supply seventeen lights for the Fifth Avenue, and undertaken the lighting of Madison and Union Squares by means, in each case, of six great lights of six thousand candle-power at the top of a mast a hundred and sixty feet high—expected to throw their rays a distance of a mile and a quarter in every direction. In the area of the city so lighted, it is calculated that five hundred and fifty gas jets will be displaced, and an enormous saving effected financially. Before long, the Company promises

to double the power at the generating stations, and by a newly invented method of storing electricity, hopes to reduce its operating expenses at least fifty per cent., and be enabled to let its lights by the hour, instead of by the night.

The United States Electric Lighting Company, employing two hundred hands, is daily turning out three dynamo-machines, fifty arc-lights, and five hundred incandescent lamps. Its offshoot, the United States Electric Illuminating Company, has four stations for supplying light, and is doing a tolerably good business in arc and incandescent lights among banks, public Companies, and the larger commercial firms. Its incandescent light is of thirty candle-power; and the Company claims to be able to light up any given area more cheaply than any gas Company.

The Edison Electric Light Illuminating Company, from which great things are expected, has not yet shown the New Yorkers what it can do, although busily canvassing the whole city previous to laying down its plant. It has, however, made arrangements for lighting up two districts, obtained the permit for laying down the street mains, and contracted for the execution of the necessary excavations. The iron pipes to be used for conveying the electric wires are two inches in diameter, containing two copper conductors, an inch in breadth by one quarter of an inch in greatest thickness, separated from each other and from the inside of the pipe by an insulating substance. In one district alone, the Edison Company has secured eleven hundred customers, for whose needs it will have to supply nine thousand sixteen-candle, and four thousand eight-candle lights. It has already, while we write, wired nine hundred and eighty houses for the introduction of the electric light, including one printing-office wired for five hundred and fifty, and another for over six hundred lights. This Company intends charging its customers according to the amount of electricity consumed as registered by electric meters; supplying them gratis with lamps, supposed to be capable of doing duty for eight months.

The Edison Company hopes to pay a good dividend out of the profit derived from the sale of motive-power alone. In its second district, there are two hundred and fourteen pumps for raising water to upper stories, two thousand three hundred and nine sewing-machines, and hoists and elevators employing an aggregate of one thousand four hundred and thirty-three horse-power; and the Company, we are told, 'is making contracts to supply electric motors for running all these.' Then it has a special department for marine business, which has already fitted up several coast steamships with the Edison Light apparatus, and holds a patent for an electrical railway. 'As soon as the first station in New York is lighted up, a section of the elevated railway is to be operated by electricity under arrangements already made, in order to test the working results of the invention.'

So many machine-shops in different parts of the States have taken to manufacturing machines for supplying light by electricity, that six of the leading Electric Lighting Companies have paid ten thousand dollars each into a common fund for the prosecution of infringers of their rights; claiming that no improved light can possibly be produced without infringing one or other of their patents. This promises well for the lawyers.

And this still better: 'Notwithstanding the league among the Companies, there is every prospect of a great war between them. The Fuller Company claims that its Gramme patent underlies the methods of all the Companies. The United States Company claims priority of invention for Farmer and Maxim, whose patents it holds, over Edison. The Brush Company claims that the other arc-light Companies are infringing its patents. Cross-actions are now pending between the Brush and Weston Companies, and the United States has suits pending against the Brush Company. When the Edison Company actually begins to sell light, there will be a legal fight between it and the United States Company. Eminent patent lawyers have been engaged, and a costly and prolonged struggle is expected.'

This is unwelcome news. Litigation means enhanced rates to the public, and a longer reign for gas, which as yet has been able to hold its ground. 'Notwithstanding that so many electric lights have been introduced in New York, the gas Companies report an increased consumption. The reason given for this is, that the electric light has created a demand for brilliancy of illumination, that increases the use of gas.'

'SHANGHAIED.'

THE word which puzzles you in the title of this paper will not be found in Johnson, Webster, or other like literature. It is of such modern origin, that the time-honoured, old, Anglo-Saxon parts of speech contained in their folios would repudiate its society. But it has such a definite meaning for that part of the English-speaking family who are of the seafaring persuasion, that I am convinced it will not easily die out of the language. Its natal place is California, that great factory of words and phrases more remarkable for novelty and energy than for elegance; and it came into existence about forty years ago.

Many people still living shared in the first great Sacramento gold-rush, and can remember the numbers of vessels of all sizes, from the great Indianan to the tiny schooner, that were left forsaken in the harbour of San Francisco—captains, mates, seamen, and cabin-boys, throwing all scruples to the winds, having 'made tracks for the diggin's,' to share in the golden harvest. Some commanders and officers, however, to their honour be it told, resisted the 'fever,' remained staunch to their ships, and made every effort to obtain men to replace their faithless crews. They offered fabulous wages—twenty times the usual amount. They were willing to put into any port the crew might name, so it was some place where there was a reasonable chance of obtaining other men. But it was all of no use; they could not induce sufficient hands to join to make up the limited ship's company they were prepared to put to sea with. It was after they had exhausted every means of persuasion, that recourse was had to that most objectionable process, known as Shanghaiing.

Shanghaiing simply means drugging seamen, and conveying them on board a ship which puts

to sea before they recover, and was at the time above mentioned, and is still to a greater or less extent, practised in every foreign port where men have been scarce, and the rate of wages high enough to make it worth the while of boarding-house masters and runners to take the risk. Sailors usually get a month's pay in advance before sailing; and in the event of a man's being Shanghaied, those who bring him on board get paid that amount. So poor Jack has to pay his own kidnappers, who seldom get punished; for he rarely returns to the same port; and if he did, would usually be more intent on having a spree, than in putting the law in force against his betrayers. Moreover, it would be very hard for him to prove anything against them; for it is not such an unusual thing for a sailor to ship on board a vessel while he is intoxicated, as they would assert he was; and he would not be able to produce witnesses to gainsay them.

How Shanghaiing got its name, I do not know. Perhaps from some ingenious native of the Flowery Land to whom Shanghai had given birth, and who was one of the first to discover that keeping a grog-shop and supplying crews to deserted merchantmen, was just as lucrative and a more reliable speculation than gold-grubbing in the diggings; besides being an easy, gentleman-like business, requiring only genius, not muscle.

In the year 1870, I was second-mate of the barque *Kingfisher* of Liverpool. We were lying off Callao, having discharged our cargo, waiting for a charter. At that time, there was a great demand for guano, and we were expecting to sail in a day or two for the Chincha Islands, to load with that fragrant commodity. But the skipper knew that ships were scarce, and he stood out for a higher freight than the merchants were willing to give.

It was Saturday afternoon, and eight bells (four o'clock) had just struck. We had finished washing down and putting things snug for Sunday, when the captain—'old man,' we called him—came on deck.

'That rascal Achoy hasn't brought our clean clothes off yet, has he?' asked the captain.

'No, sir,' I replied; 'I've seen nothing of him.'

'Well, just take one of the boats, the gig, and give him a hint from me, that suppose I "no catchee clothes to-night he no catchee dollar;" and at the same time leave this letter at the agent's.'

'Ay, ay, sir,' I replied; and was diving below to put on a jacket, when he stopped me, saying: 'Hold on a bit. You had better take a couple of the apprentices to pull you ashore; for I don't want any of the men to leave the ship. Wages are high here, and there have been a good many desertions from the craft lying closer in.'

'Very good, sir.' And in a few minutes the two boys and myself were on our way ashore. We passed close to a large full-rigged ship called the *John E. Chew*, flying the stars and stripes. She had come up laden from the Chincha Islands more than a week before, and I was surprised to find she had not sailed yet; for, making every allowance for the dilatoriness of the Peruvian dons, she had had ample time to get her papers and clear the custom-house. I remarked as much to the lad pulling the stroke-oar.

'Old Pietro the bumboat-man told me,' said he, 'that she is shorthanded; some of her crew having skedaddled for the Manto diggin's. Pietro says they are paying five dollars a day down there to strong hands.'

'Pietro,' I replied, 'had better keep his chattering tongue from spreading idle yarns aboard the *Kingfisher*, or his visits will be pretty soon put a stop to.—In bow; stand by to fend her off; and we drew up to the landing-place.

At the same time the gig of the *John E. Chew*, which I had seen putting off from her as we passed, brought up alongside of us. The man in her sternsheets, whom I supposed to be the captain, was as tall, wiry, lean, and crafty-looking a specimen of muscular humanity as ever hailed from Boston. The men who pulled did not look like foremast hands, and I took them to be petty officers, who could be trusted not to take French-leave. The Yankee skipper and I landed together; and I noticed, as I hurried off on my errand, that he took a good look at me.

The agent lived some distance off; and I suppose it was about half-past five o'clock when I turned into the street in which our Chinese washerman was domiciled. It was as disreputable-looking a thoroughfare as could well be imagined. The houses were shabby, one-storied wooden shanties, inhabited by seamen's boarding-house keepers, Chinese stevedores, and 'waterside characters' of all sorts; and every second house was a grog-shop. I was very thirsty, and was regretting that these latter had such a mean, uninviting appearance, when a placard with a bright red triangle, and the words 'Bass's India Pale Ale' conspicuously displayed on it, caught my eye. It was hung on the open door of one of the drinking dens; and glancing in, I caught a glimpse of the sinister features of the captain of the *John E. Chew*. I stopped. The temptation was great. It was months since I had tasted a drop of good English beer. 'Well,' said I to myself, 'what is good enough for the skipper of a big ship like that, ought to be good enough for the second-mate of a bit barquey, so here goes.' I marched in.

The place was very dark; but I saw the outline of a man behind the counter, though I could not distinctly see his face. He was leaning over, talking in low tones to the American captain. They both looked up as I came in; and in reply to my request for a bottle of Bass, the bar-keeper said, 'All right. Step inside, and I'll bring it to you.'

I had no wish to disturb their conversation, so I complied. I fancied afterwards, that as I passed into the room behind the shop, I observed a sharp glance to pass between the two whisperers, who were the only occupants of the place. The room I entered was a vile den, smelling most horribly of bad spirits and stale tobacco. As my eyes got used to the darkness, I saw it contained a rough table, all notched and stained, and a few battered chairs, on one of which I sat down. My beer was a long time in being brought in; and I shouted and hammered on the table several times before the bar-keeper appeared, with the bottle in one hand, and a large tall glass in the other. He said something in gruff tones about 'having had to go to the cellar for it;' and proceeded to draw the cork. As far as I could see, the glass was quite empty, and the capsule on the bottle undisturbed;

but as I had no suspicion of any foul-play being intended, of course I did not examine them particularly. As I said before, I was very thirsty; and I took a good long pull, before setting the glass down. I then poured the rest of the beer into it, and was thinking of finishing it off and departing, when I felt a numb sort of sleepiness come over me. I knew at once I had been drugged, and made a rush for the door; but before I reached it, I staggered, and fell full length on the floor, where, after one or two ineffectual attempts to cry for aid, I became insensible.

I was awakened to consciousness by being roughly bundled into the sternsheets of a boat.

'Steady, Jack,' I heard some one say, 'or you'll be rousing him up.'

'No fear,' replied a gruff voice I recognised as the bar-keeper's; 'I gave him too good a dose for that. I guess he won't stir this side of sunrise.'

I knew by the sound of the oars that the boat had put off from shore; and knowing now that I was being Shanghaied, I tried to call out for assistance. But my throat and mouth were wrapped round with many folds of a worsted comforter, which, while leaving my nostrils free, allowed only a muffled sound to escape. I tried to put up my hands to remove it, but could not stir them. A long monkey-jacket had been buttoned tightly round me, with my arms inside instead of in the sleeves, forming a veritable strait-jacket. My legs seemed to have some weight on them which prevented me moving them, and a slouch-hat had been placed on my head completely covering my eyes. I struggled, but it was no use. I was helpless as an infant.

'There! I told you so,' said the first voice; 'he's woke up.' And the oars stopped.

'Woke up! has he?' rejoined the bar-keeper. 'I'll soon give him some soothin' sirup, as I'll put him to sleep agin. Just you ketch hold of his nose.'

I was lying on my back. Almost immediately, I felt a rough hand closing my nostrils. At the same time, some one pulled the comforter down from my mouth, and as I gasped for breath, forced the neck of a bottle between my teeth. I had no option but to swallow sputtering some of its contents. The bottle was then withdrawn, the comforter replaced, my nostrils released, and in a few minutes I relapsed into unconsciousness.

On again awakening, I found myself lying in the bunk of a small cabin. Tins of preserved meat, barrels of sugar and flour, and other stores of that sort, scattered around the place, showed me it was used as a steward's storeroom. The bunk had no mattress or bed-clothes in it. There was a port over it; and as the monkey-jacket and comforter had been taken off me, I raised myself and looked out. Callao was visible in the distance; but I could see, from the position of the shipping, that the vessel I was in was lying very far out. In fact, as I afterwards discovered, she had been moved to her present berth during the night. But the thing that interested me most was a British gunboat lying about the third of a mile off, and the nearest vessel in sight, her broad union-jack drooping over her stern. I guessed it to be about eight o'clock in the morning. I was about to try the door, when a key turned in it, and it opened for the entrance of no other than the captain of

the *John E. Chew*. I was not surprised, for I had already formed an opinion of where I was.

'Well, my lad, how do you feel now?' he said in a brusque manner.

'How do I feel?' I replied. 'Why, how should you expect a man to feel who has been nearly drugged to death?—as you very well know,' I added, looking straight at him.

'Ho, ho! that's how the land lies, is it?—Drugged, eh? I don't know anything about drugging; but I know you came on board last night in a state of beastly intoxication; so I put you in here, to take care of you, instead of letting you go to your proper place, the foc'sle.'

'My proper place! How is that?' I inquired.

'How's that?' he repeated. 'That's cool, that is. But I suppose the drink has knocked it all out of your head. Why, man, you've shipped before the mast with me, Captain Job Price, master of the United States' ship *John E. Chew*, port of New Haven, on a voyage from Callao to Tryeast [Trieste]. Your wages is thirty dollars a month; and you've had a month's pay in advance, which I've got witnesses to prove.' He spoke this as if he were repeating a lesson which he wished to impress on my memory. But now, changing his tone to one of menace, which was emphasised by the display of a revolver which he drew from a pocket behind him, he continued: 'And look ye here, my lad; you'd better turn to and do your duty; for, if you try any of your shames on with me, you'll find you've got hold of the wrong hoss! And now we understand each other, come on deck, and give a hand to get under-way, for I'm going to make sail right away—I am.'

'I shall do nothing of the kind,' I said; 'and you had better put me off to my own ship, the *Kingfisher*'—

'Now, jest you shut up!' he interrupted. 'I want none of your lying yarns. I tell you plainly, that if you don't go to your duty at once, I'll put you in irons down in the lazarete until I get you in blue water; and then I'll string you up by the thumbs to the mizzen riggin', and lather you properly; and lead you a dog's life afterwards. Whereas, if you behave as a sensible man, I don't see why you shouldn't be as comfortable on board this craft as any other.' He spoke, and looked so determinedly, that I felt he would be as good as his word, and that my best chance would be to appear cowed and convinced; so, after a pause, I said: 'It's very hard that a man should be dragged off and shipped whether he will or no. But if it cannot be helped, I suppose I must make the best of it. Only, I warn you, Captain Price, that kidnapping a British subject is a very serious offence.'

'Oh, I guess I'll take my chance of that,' he replied; and stepping on deck, motioned me to follow him.

'Here, Mr Snell,' he called; 'this new hand has got sober at last, and wants something to do.'

'Ay, ay, sir,' replied the mate from the fore-part of the ship, where he was superintending the men who manned the windlass. Then coming aft, he said: 'She's hove short, sir.'

'Very well. Loose and sheet home the topsails. We'll take a starboard cant with this breeze.—Here!—to me!—let's see how smart you can be in loosing that mizzen topsail.—And mind you—

no tricks, or'—and he gave a significant look and a tap on his revolver pocket.

I would like to have strangled him; but I could only do as I was bid. As I went up the mizzen rigging, I gazed despairingly at the gunboat; but I could expect no help from her. She was too far off for a shout to be heard, even if I dared to raise one. And as to swimming, it would have been certain death, for the place swarmed with sharks. When I got on the yard, I saw a small shore skiff alongside amidships, which I had not observed before. Three men came on board from her, and my blood boiled as I recognised the villainous bar-keeper as one of them. 'Come on board to be paid for me,' I said to myself; 'and I've been sent up here to be out of the way.' I was confirmed in this belief by seeing them and the captain disappear down the companion-way, the latter making a warning gesture to me as he did so. He evidently thought I was completely tamed, and only wanted a reminder to keep me quiet. But at that very moment a ray of hope had flashed into my mind. All the ship's boats except the gig had been brought on board and secured. It was hooked on to the davit falls, but was still in the water. If I could but reach that boat, unhook the falls, and shove off, I could surely make such an outcry before I was captured as would attract the gunboat's attention. To cast loose and lower one of the other boats would take them at least five minutes, so I had only the skiff to take into account. The idea was no sooner conceived than acted on.

Grasping a back-stay, I slid rapidly down. Fortune favoured me. All the men who were not aloft were at the windlass. The fore and main topsails had been sheeted home, and as I reached the boat, the cry of 'All aweigh!' and the rapid clanking of the windlass palls, told me that the anchor had left the ground and the vessel was moving. A moment after, I was discovered, and I heard shouts and a hurried tramping along the deck. With nervous eagerness, I unhooked the falls; but my heart sank as I found the boat's painter was made fast on deck.

I felt in my pocket for my clasp-knife. By the greatest good luck, it had not been taken from me; an instant sufficed to open it, cut the painter, and give a vigorous shove against the ship's side. As I drifted under the stern, Captain Job Price's face appeared just above me. He had his revolver in his hand.

'Come back!' he cried with a horrible oath, 'or I'll drill a hole through you.'

My only reply was to throw myself down in the boat, and make as small a target of myself as possible; for I saw by the man's face he meant murder.

'I'll give you one more chance,' he yelled. But I lay close, for I knew the ship was gathering way every second, and his voice already sounded farther off than before. Another second or two passed, and then he fired. The ball struck a thwart above me, and glanced off. Again and again I heard the reports of the revolver, and each time the boat was hit; but I was not touched, the distance between us being now enough for the gunwale of the boat to be a protection to me.

When he had emptied all six chambers of his revolver, I stood up, and saw the *John E. Chew*

some fifty yards off, gradually stealing away before the wind; but I also saw another sight that was not by any means so pleasant. This was the skiff putting off from the ship in pursuit of me, with the bar-keeper and his two companions in it. I looked round the gig; there were no oars in it. I tried to drag out a thwart; but they all defied my efforts to move them. With the strength of desperation, I then tried the seats in the stern; and after repeated attempts, succeeded in loosening one of them. A final wrench, and it came away in my hands. It was about five feet long, nine inches in width, and an inch thick. I then commenced to paddle with it, first on one side, and then on the other, standing up and using all my strength, and shouting as loud as I could, to draw the gunboat's notice. But the boat was too heavy for this mode of propulsion to have much effect on her, and the skiff gained fast on me. The bar-keeper was standing in her bows, one man was rowing, and the other was seated in the stern. They said not a word as they came up. And when the bows of the skiff touched the stern of the gig, the bar-keeper made a spring. As he did so, I swung round my improvised paddle, and hit him with the edge of it fairly across the side of his head. He gave a howl, and fell over into the water, nearly swamping the skiff as he went down. In the confusion that ensued, the rower dropped one of his oars; and before they could recover it, pick up the half-drowned bar-keeper, and bale out the water they had shipped, I had, by vigorous paddling, put a good hundred yards between the two boats.

When the occupants of the skiff had recovered from their catastrophe, I was surprised to find that they showed no intention of following me. On the contrary, my friend the bar-keeper was huddled into the stern; and the other two taking an oar apiece, began to pull as hard as they could for the shore, at right angles to the course I was pursuing. I was greatly relieved; and on looking round, soon discovered the cause of this change of tactics—the steam-launch belonging to the gunboat was coming rapidly in my direction. As I afterwards found out, the reports of the revolver had been heard by those on board; and as the launch was just coming off from shore, she was ordered to proceed on, and see what was the matter. Captain Price had also observed that the British lion was on the alert; and the *John E. Chew's* main-topsail, which had been backed, was filled again; and she bore away under a press of canvas, leaving her boat with me as a trophy.

On the launch's arrival alongside of me, I told the midly in charge my story; and he, taking the gig in tow, took me on board the gunboat. I repeated my tale to the captain. He seemed rather incredulous; and sent an officer on board the *Kingfisher* to make inquiries, who brought my skipper back with him. However, as the 'old man' verified my yarn in some of its details, the naval captain began to take the thing up more warmly. But when it came to my producing legal proof of what had occurred, he seemed anything but satisfied.

'You see,' he said, 'you have not the ghost of a case against the master of the American ship. He, of course, would say that you came, or were brought on board, drunk, and that you agreed to sail with him. Nay, I have no doubt his officers

would swear to that or any other tale he might choose to invent. And if you were really one of his crew, he had a right to try to prevent you deserting. On the other hand, if he had wounded you, I should feel it my duty to give chase and bring him back; and as it is, I shall demand redress from the United States' consul.—With regard to this grog-drugging vagabond of a bar-keeper,' he continued, 'the case is different, and I think something might be done; so I shall take you on shore with me at once, to point out the house and get him arrested.'

Nothing was done, however; for on proceeding to the street in which I had been drugged, I found the houses so like each other, that I could not take it on my conscience to swear to any particular one as being the place; and as for the bar-keeper, he was not seen or heard of as long as the *Kingfisher* was in the neighbourhood. So I had, as our 'old man' said, 'to take the lesson for what it was worth.' And he added: 'Serve you right for going into such a den.'

I now command as fine a ship as the *John E. Chew*; and two years ago, I had the pleasure of meeting Captain Job Price—it was in Melbourne—and before we parted, he had received as good a 'lathering' as ever he promised me; and though I had made myself liable to a fine of five pounds, which I duly paid, I do not think I ever spent five pounds in my life with such a sweet consciousness of having got value for it.

THE MONTH.

SCIENCE AND ARTS.

AMONG the many interesting topics which lately came before the British Association at York, was the subject of Lightning-conductors, by Mr Vyle. This paper opened by alluding to the many accidents from lightning which are constantly recorded, and to the undoubted fact, that a conductor properly fixed and in good contact with the earth, is a sure protection from such calamities. The expense and difficulty of ascertaining whether a conductor already fixed is really in efficient order, may be estimated when it is stated that no tests can be made until a wire is connected between the very point of the apparatus and the earth. In the case of a high chimney-shaft, this expense would be almost prohibitive. Mr Vyle meets this difficulty by the invention of a new form of lightning-cable, which carries a core of insulated copper wire. This wire is in metallic contact with the point of the conductor, and emerges from the core a few feet above the ground, so that, by simple attachment of proper instruments, the efficacy of the conductor in case of thunderstorms can be periodically and easily tested. The necessity of some such arrangement as this was seen during the late examination of the wires which protect York Minster, when the earth connections were found to be faulty, although the conductors themselves were good. Under such circumstances, had lightning struck the building, the result might have been disastrous.

In the case of lightning, we are all anxious

enough to aid its escape to mother earth, where its power for harm is at an end. In the meantime, electricians are straining every nerve to procure in the easiest manner, and to store for future use, that electric energy which it is prophesied is to do so much of the work of mankind. Faure's improvements on the Secondary Battery of Planté have given a wonderful impetus to this particular branch of electric science; and although we have learned that the first accounts of his experiments were tinged with some perhaps natural exaggeration, there is no doubt that many things are now possible which were impossible before those experiments were made. We have now before us a drawing of the little balloon which, urged forward by an electric motor at a speed of two hundred feet per minute, forms a very attractive feature at the Paris Electrical Exhibition. This balloon, measuring about twelve feet long, is egg-shaped, but pointed at each end. It carries a Planté battery, which furnishes a current for nearly an hour to the motor, which drives a very light two-bladed fan. The balloon travels along a fixed wire between two galleries of the Exhibition building; and if it can be called nothing else but a toy, is at any rate a very interesting and suggestive one.

From the time when the Montgolfier brothers made their first experiments, now just one hundred years ago, the French have been eager supporters of everything in the shape of a balloon. But in our own country there are many earnest workers who are doing their best to give a practical value to that aerial traveller. Of these workers, Mr Coxwell is one of the most persevering, and from time to time he lets us know by letters to the papers that his ideas are not slumbering. The Crystal Palace, Sydenham, has lately been the scene of some experiments conducted by him, having for their object the perfecting of a system of signalling by means of small captive balloons. The fact that such balloons form conspicuous objects in the sky, easily seen from a great distance, coupled with the readiness with which they can be lowered or raised to form the combinations required by a pre-arranged code, will show that Mr Coxwell's ideas are not visionary. The system is meant to act as an adjunct to the heliograph, which of course cannot be worked unless the sun is actually shining.

The recent arrival in London of a consignment of fresh meat and game from Australia, transported from one side of the globe to the other in a frozen state, but which, in the opinion of competent judges, can, when thawed, be considered equal to home-fed stock, is an event of both scientific and domestic importance. It may also serve to remind us that beef and mutton from America have during the past five years been, by the same means, imported to this country in vast quantities; no less than one hundred and eight thousand tons of American meat having passed through the Metropolitan market alone; to say nothing of the

live-stock which has reached us through other channels. The question may naturally be asked, How much of this cheap foreign meat has been sold to the consumer for and at the price of British produce, and why? Alleged attempts to obstruct the sale of the Australian meat will form the subject of an inquiry by the Markets' Committee. The said Committee would gain the applause of the general public if they would at the same time take steps to explain why, with so much cheap food at hand, beef and mutton must still, by the masses, be looked upon as rare luxuries.

It is not meat alone that we may expect to receive from our Australian friends; for, according to a newspaper entitled the *Colonies and India*, the shipment of various fruits can be made remunerative. Apples, pears, oranges, walnuts, and grapes can be so packed as to arrive on our shores in marketable condition. The softer kinds of fruit can hardly be made to withstand the voyage; but there is every likelihood that those named will soon be competing with the produce of our gardens at home.

In no department of human industry is more ingenuity shown than in those wonderful modern implements of agriculture which have revolutionised the work of the farm; and perhaps the most interesting of these machines is the Reaper-and-Binder, which, as its name implies, not only cuts the corn, but binds it into sheaves. For a long time, these Reapers had one common fault. The binding medium was wire; and in spite of every care, particles of metal would find their way into thrashing-machines and into other situations where their presence was not desirable; so, tempting prizes were offered by different Agricultural Societies for a machine which would do equally efficient work, but which would bind the sheaves with harmless string. At a trial, lately, by the Long-Sutton Agricultural Society, Mr W. A. Wood's String Binding-machine cut six acres of wheat in less than five hours, tying each sheaf in two and a half seconds, the only interruption which occurred being when the ball of twine ran short. It is estimated that at least one hundred and fifty of these machines have been at work in the harvest-fields of Great Britain.

Those who are interested in farming pursuits will read with great interest a book written by Mr Douglass, on *Ostrich-farming in South Africa*. Employing a capital of about eight millions in Cape Colony alone, ostrich-farming may be now reckoned as one of the recognised industries of the country. Mr Douglass, who was one of the first to study this curious art as a profitable industry, has introduced with considerable success the system of artificial incubation. We learn from him, among other items, that the price of a pair of good birds for breeding purposes varies from one hundred to one hundred and thirty pounds; that each pair requires a run of about forty acres; and that they find their own food, except in severe drought; that the chicks will fetch six pounds each when only a day old; and that in process of time, each bird yields about twelve pounds annually in feathers. The greatest expense at starting an ostrich-farm is represented by the cost of fencing; but with good management, a net return of thirty per cent. can be reasonably looked for.

Miss Ormerod, of Dunster Lodge, near Isleworth,

who recently published *A Manual of Injurious Insects*, is still prosecuting her labour of love, which is likely to prove of great service to all interested in agricultural pursuits. She has been for some time collecting evidence, from all willing to help in the good work, bearing upon the injuries caused by insect pests to our food-crops, fruit and forest trees, the results of which up to the present time she publishes in the above work. She purposes continuing her researches and Reports, and with this view asks all who have the opportunity of doing so, to send her detailed accounts of the injuries which have come under their experience, and the remedies, whether effectual or not, which have been employed. In return for this information, which need only take the form of a few notes, with perhaps a specimen of the unwelcome insect, the writer will receive a copy of her printed yearly Report, telling him of the opinions and experiences of some hundreds under similar circumstances. Many of the pests which it is thus sought to eradicate, have had so much written about them, that there seems very little left to discover; but there are many others whose depredations go on year after year, simply because either no remedy has yet been found, or that remedy is only known to the few.

An instance of the obscurity which still hovers round many members of the insect world, is seen in the honey-ants. So little was known of the habits and nests of these intelligent insects, that in 1879 the Rev. Dr McCook undertook a journey to New Mexico, where they were said to be found, for the purpose of studying them. The results of his observations are recorded in the proceedings of the Academy of Natural Sciences of Philadelphia for January last. The nests of the honey-ants are generally found in high and dry situations, and have the appearance of mounds of gravel. A funnel-shaped opening leads to various galleries and honey-rooms. Observation would seem to suggest that the honey-ants are nocturnal insects, that the honey is secreted in the abdomen of the insect, which is distended into a bag the size of a small grape, and that it is procured from the sugary sap of oak-galls. It is rather acid, owing to the presence of formic acid; but the Mexicans and Indians eat it as a delicacy. A thousand ants will collect about one pound of honey.

The telegraph system in Japan can now boast of four thousand miles of line, comprising about ten thousand miles of wire. The first telegraph in Japan was constructed only ten years ago, so that the increase of mileage has been very rapid. A special adaptation of the Morse dot-and-dash system is used, because the Japanese language has no alphabet; but forty-seven signs are sufficient to meet all needs; and a school has been established for the education of Japanese youth into the mysteries of telegraphy and telephony. A curious difficulty is met with in the fact, that spiders have taken a fancy to weaving their webs between the telegraphic wires, with the result, that directly a shower of rain occurs, the webs become conductors of electricity, weaken the wire-currents, and thus play havoc with the messages. A staff of men with bamboo rods are constantly occupied in sweeping these tiresome cobwebs away.

In British Columbia, near Cape Commerell, large deposits of sand are found in which are

mixed tiny scales of gold. The gold is quite visible to the eye when the sand is penetrated a few inches from the surface; but its particles are so small, that no plan has hitherto been found of extracting it with profit. A San Francisco Company have, however, lately been treating this golden sand by means of a new machine invented for the purpose. It consists of a series of metal plates with holes through them, placed one above the other. These plates are covered with an amalgam for which gold has an affinity. The sand is, by means of water, washed through the pierced plates; and by the time that each charge of material reaches the bottom of the system, very few particles of gold have failed to attach themselves to the amalgam. The process is said to work well.

A natural product which has perhaps made as many fortunes in the New World as gold-mining, is petroleum. This industry was, for the best of reasons, considered to be an American monopoly; but, according to all reports, this monopoly can exist no longer. For a long time, rumours have been current of certain stores of petroleum which were believed to exist in North Germany. These reports were for a long time discredited; but there is no longer any doubt about the matter, for petroleum is now being pumped in large quantities near Peine, in Hanover. It is predicted that the new springs will be able to supply the whole of Europe with petroleum. This fact, coupled with the circumstance that Germany has hitherto been a large consumer of the American product, foreshadows changes of an extensive nature in a very important branch of commerce.

A recent discovery in Pennsylvania is considered by some to illustrate the formation of coal. At a place called Scranton, some excavations were being made for the foundations of a building. Cutting through a bed of peat, the workmen came to a stratum of what had the appearance of tough black jelly. When dried, this jelly becomes solidified into a brittle substance, hardly to be distinguished from anthracite coal, though upon analysis it was found to contain only twenty per cent. of carbon. It burned at a red-heat, and left an ash resembling that of ordinary coal.

Among the many plans which have been proposed for giving iron a coating which will protect it from rust, there are two which stand out prominently, by reason of their undoubted success; one is the process of Professor Barff, and the other that of Mr Bower. In both processes, the iron receives a coating of magnetic oxide; but the means by which this is brought about are different. Mr Bower has now purchased Professor Barff's patents, and a Company has been formed to work them, with the first-named gentleman as managing director, and with the latter as consulting chemist. When this Company is fully started, we may hope that non-corrosive iron will become a common, rather than an exceptional thing. We may mention that the colour of the coating varies from a gray to a deep black; and that to iron so treated, paint will adhere with great tenacity.

A great deal has been heard lately about koumiss, as useful in cases of consumption. The genuine article—which is in reality fermented mare's milk—is peculiar to one particular district, namely, the Steppes of Russia. Attempts to make it in Moscow and St Petersburg have failed, probably owing to

the want of that rich pasture which the Steppes afford. Russian physicians are now prescribing a visit to the Steppes for their consumptive patients, perhaps taking into account the fine dry atmosphere there met with, as well as the virtues of koumiss. This fermented milk has for years been the principal food of the Kirghizes, who are forbidden by their religion to indulge in stronger liquors; and it was the vast difference which appeared in the stamina of these men, according to the time when koumiss was seasonable or the reverse, which first attracted the attention of medical men to its regenerative properties. Dr Carrick, physician to the British Embassy at St Petersburg, is said to be contemplating the establishment of a retreat at Orenburg, where patients will be received during the summer. Here sufferers will have the benefit of a Madeira-like climate, coupled with the medicinal virtues of the new remedy. It may be added that the Aylesbury Dairy Company produce from cow's milk a species of koumiss which has been favourably spoken of.

The Glasgow Mechanics' Institute, established for nearly sixty years, has just taken a fresh lease of life under the new name of 'The Glasgow College of Science and Arts.' The whole nature of the Institution has been re-modelled, and its principal feature is now—by means of classes—to give young engineers, architects, builders, chemists, and technical workers generally, such a knowledge of their business that 'rule of thumb' shall give place to scientific accuracy. That the students profit by their instruction, may be gleaned from the results of the last Science and Art Examinations. In the drawing-classes—including geometrical and mechanical drawing and building construction—eighty-eight per cent. passed of those who presented themselves for examination, while forty-four per cent. took Queen's prizes. The other subjects brought forward as many, and in some cases more proficient. We wish the Institution every success under its new title.

According to a contemporary entitled *Iron*, there was lately to be seen in Queenstown harbour a novel fishing-vessel, which is perhaps destined to represent the type of fishing-smack of the future. It is described as a schooner-rigged steamer, capable of carrying one thousand tons dead-weight, including fuel. She had on board ninety tons of salmon and trout, which had been caught at Labrador and Sandwich Bay some ten days before her arrival at Queenstown. Her hold is occupied by refrigerating chambers, by which the fish can be kept in a frozen state for any required time. By the aid of such a vessel as this, fish need no longer be classed as perishable goods. The cargo could be disposed of by degrees, according to the state of the market; and more than this, the fish peculiar to one country could be easily transferred to another, where such had never before been seen in a fresh state.

In this connection, we may express a hope that the Committee lately appointed to inquire into the Metropolitan Fish Supply will be able to suggest some means whereby this wholesome and unlimited food can be brought nearer the mouths of the suffering poor. A gentleman lately wrote to the *Times* saying that at Great Yarmouth hundreds of tons of herrings are carted away for manure, merely because they are slightly broken.

The price which they fetch varies from twenty to twenty-five shillings per ton. It requires no great arithmetician to show that this waste fish could be sold in nearly any town in Great Britain at a handsome profit for one halfpenny per pound. In the *Gentleman's Magazine*, the following sensible remarks appear, from the pen of 'Sylvanus Urban': 'From the Billingsgate dealer down to the fisherman, all are in the conspiracy to keep up the price of what should be the cheapest form of food. This is a time of public Companies. In place of the schemes for working distant mines and placing British capital under foreign control, why do not some capitalists start a cheap fish-supply Association? This, while conferring a priceless boon upon the labouring poor, is bound, with judicious management, to prove one of the most remunerative of speculations. Everything, however, must be undertaken by the Company. It must have its own smacks at our principal fishing-ports, its own sailors, its own carriages for conveyance, its own markets. Fish could then be supplied at a fourth of the price now demanded. Some opposition from those interested in the preservation of existing monopolies is probable; a little firmness would, however, soon sweep this aside, and an investment likely to be little less profitable than the great water Companies and the like would be supplied.'

There is now being built at Geneva a model vessel, which if its constructors' anticipations prove to be correct, will cause quite a revolution in the art of ship-building. M. Raoul Pictet, to whose ingenuity this vessel is due, believes that he has discovered a new principle in ship-construction, by which the resistance offered by the water is very much diminished. By certain modifications in the shape of the hull and of the keel, the ship is caused to raise itself as it progresses, so as to assume a gliding motion over the water, instead of ploughing through it. The particulars at hand are very meagre; and such being the case, it would perhaps be as well to withhold any opinion upon the merits of the discovery until the actual trial proves its value, or the reverse.

In many parts of Asia there is a plant known as the 'shoeblack,' which although it will not grow in our gardens, is not unknown in hot-houses. It possesses brilliant scarlet flowers, which yield a thick gummy juice, which gives a varnish-like polish to anything to which it may be applied; hence its use as a substitute for blacking on boots and shoes. The ladies of China are said to use the same plant for dyeing their hair and eyebrows.

The Agricultural Hall, Islington, one of the largest halls in London, is, despite its name, given up to Exhibitions of the most varied character. Only the other day, it was crowded with printing machinery; next came an Exhibition, the second of its kind, of everything pertaining to the leather trade. We are now promised in the same place a show of perhaps more general interest than either of those named. This is a Naval Engineering Exhibition, which, according to the anticipated programme, will embrace a very wide field indeed. It includes the exhibition of various systems of diving, in a tank specially constructed for the purpose; the delivery of lectures on naval architecture, mechanics, &c.; the exhibition of machinery and mechanical contrivances connected with the art of ship-building; and what is more

important still, a prize of one hundred guineas is to be offered for the best means of saving life in cases of shipwreck; a second prize of fifty guineas being offered for the best invention of a humane character connected with seafaring matters. The Exhibition is being organised by Mr Samson Barnett, Junior, of 4 Westminster Chambers, London.

The United States Consul at Cartagena has issued a Report giving a very interesting account of the way in which india-rubber is gathered in Columbia. A hole is dug at the foot of the tree, about the roots of which a space has been previously cleared. The hunter then cuts in the bark a V-shaped incision as high from the ground as his arm will stretch. The milk then exudes from the cut, and runs into the hole below. When no more 'milk' can be persuaded to run by this process, the tree is cut down, gashed in every direction, whilst leaves are placed below to catch the milk that flows from the cuts. The rubber as it comes from the tree is as white as cream; but it speedily turns black on exposure to the air. It is coagulated in the holes where it has collected by means of hard soap, or the root of the mechuacan, when it is ready for market. This practice of cutting down the trees in order to obtain the rubber, is equivalent to killing the goose with the golden eggs; and there is no doubt that unless the government take stringent measures for their protection, the local trade in india-rubber will come to an end.

A RUNNING-MAN TARGET.

The mode of rifle-practice in use in the army and among our Volunteers has recently been the subject of much discussion in the newspaper press, and its efficiency has, among authorities qualified to judge, been gravely doubted. This has been especially so since the war in the Transvaal, when the very remarkable superiority of the Boers, compared with our English soldiers, as shots, was unquestionably determined. Our marksmen had hitherto practised at fixed and conspicuous objects, at regularly measured distances, and with all the leisure and opportunity that was requisite to raise shooting into something like a fine art. And, practised within these lines, the pursuit *did* in many instances assume the precision and elegance of a fine art, and the ability to strike a fixed object at a given distance, had, in the case of many individuals, arrived as nearly as possible at perfection. But shooting on a practice-ground, and shooting in the excitement and hurry and confusion of a battle-field, are two quite different things. To hit a moving object at three hundred yards, when that moving object has also a rifle, and can return our shot, is not quite the same thing as striving to make bull's-eyes on an iron target, with nothing to distract the mind or unsteady the nerves. Hence, our military authorities are beginning to acknowledge that, though they cannot introduce to the practice-ground the danger and smoke and commotion of an actual engagement, they can so far meet this deficiency by accustoming our soldiers and Volunteers to hit an object moving at lesser or greater distances, and at various rates of speed.

In view of this change in the training of marksmen, Mr W. B. Blaikie, of Edinburgh, has invented and patented what is called a 'Running-Man

Target,' which can be obtained at a price which places it within the reach of every Volunteer corps. The target is of stout millboard, cut to represent a man, life-size, and painted to the fancy of the shooter. It is suspended from a wire, along which it runs, and can be worked by one man, who, while operating, is protected in the ordinary marking-butt or mantlett, and who does not require to leave the butt, but can signal the hits without leaving cover. It can be erected on any ground—rough, smooth, or sloping; and one or more targets can be run at the same time, and at any pace up to twenty miles an hour. On rifle-ranges, by an ingenious combination of two or more machines, the moving target can be made to appear at unknown distances each time, giving the riflemen the opportunity of practising snap-shooting. The targets, besides being light and cheap, can be patched on being struck, and are said to stand a good deal of hitting. Several military authorities, and among them Major-General Sir Frederick Roberts, have seen the target in operation, and are of opinion that it is likely to prove a success. The full measure of its success is, of course, a thing of the future; but that there can be no doubt as to the necessity for some such moving apparatus on the practice-ground, is forcibly shown by what happened in June last, at the annual meeting of the Edinburgh and Mid-Lothian Rifle Association, when the above running-man target was tried, and out of two hundred shots fired at it individually and in volleys, the 'man' was only struck *thrice*!

We may add that Mr Blaikie's apparatus is made by Messrs Wm. Bain & Co., Lochrin Ironworks, Lower Gilmore Place, Edinburgh.

A MEMORY.

A LITTLE village far away;
A cottage near a hill;
A verdant dene through which there flows
An ever-murmuring rill.

A gentle maiden by my side,
Reflected in the stream,
Made lovely by her loveliness—
'A dream within a dream.'

A little church behind the trees;
A grave beside the wall;
A stone; a few forget-me-nots:
I loved her—that is all.

J. P. HUTCHINSON.

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